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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,256	11/17/2003	Hiroyuki Hagihara	Q64625	4774
23373	7590	07/14/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LE, HOA T	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,256

Applicant(s)

HAGIHARA ET AL.

Examiner

H. T. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Arguments

2. Claims 2-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishida et al (US 6,660,380) as set forth in the last office action and further discussed below.

Applicant argued that although “Ishida et al disclose that a metal soap can be coated on the zinc silicate coating, Ishida et al do not provide any disclosure of the temperature that should be used to mix the metallic soap with the zinc oxide (feature (b)), and do not disclose that the metallic soap is coated directly on the zinc oxide particles (feature (c)).”

With regard to the mixing temperature argument, the mixing temperature is a process limitation, while claims 2-14 are product claims. Therefore, as long as all the product limitations are met, rejection under 35 USC 102 is appropriate. In this case, the product limitations are (1) zinc oxide particles and (2) the surface of which is coated with “metallic soap”. Both limitations are met as discussed in the last office action.

With regard to the “directly coated” limitation, such language does not preclude a bonding layer on the surface of uncoated zinc oxide particles. The zinc silicate layer provides siloxane bonding to the surface of the zinc oxide particles; therefore, coating metallic soap on zinc oxide particles, whose surface has been pre-treated with zinc silicate, is equivalent to directly coating metallic soap on the zinc oxide particles, wherein the surface of

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the zinc oxide particles comprises siloxane bonding. Thus, claims are met by the teaching of the Ishida patent.

Applicant further argued that the Ishida patent does not teach the coated zinc oxide particles of the present invention in which the effect provided by the present invention “that dispersibility of the coated zinc oxide particles in resin can be greatly improved” is not obtained in Ishida. Contrary to Applicant’s argument, the Ishida patent does teach coated zinc oxide particles that exhibit improved dispersibility. At col. 12, lines 10-23, Ishida states that the amount of the metal soap coating should be from 1-20wt% in order to provide a sufficient improvement in dispersibility. Therefore, the coated zinc oxide particles made from the claimed invention possesses the same structural/chemical/mechanical/physical properties as those of the product taught by Ishida. Consequently, the resin composition as claimed in claims 9 and 10 and the molded product as claimed in claims 11 and 12 are the same as the resin composition and molded product taught in the Ishida patent as discussed in the last office action.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Ishida patent (US 6,660,380) in view of the Maeda patent (EP 0 824 132) as set forth in the last office action and further discussed below.

Applicant argued that the Maeda patent is “very different” from the Ishida patent “in its technical field” because while the Maeda patent “aims to provide a thermoplastic resin composition containing a titanium dioxide pigment, which is capable of forming a film or

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coating exhibiting a satisfactory surface state on paper, even when the concentration of titanium dioxide pigment in the thermoplastic resin composition is high”, “[i]n contrast, Ishida et al aim to provide zinc oxide particles which have suppressed surface activity and give safe and effective UV ray shielding ability to a variety of products.”

The examiner asserts that both patents teach the use of pigments in a thermoplastic resin. The UV shielding ability possessed by the particles taught in the Ishida patent would have been advantageously replaced the titanium oxide particles taught in the Maeda patent because such UV shielding ability can provide fade-resistance to the paper taught in the Maeda patent. In addition, the objects of the Maeda patent are not limited to just paper coating. The patent broadly teaches application of coated titanium dioxide particles as pigments in thermoplastic resin composition.

Applicant further argued that “one of ordinary skill in the art would not have been led to applying the teachings of [the Maeda patent], which involve conventional titanium dioxide, to the disclosure of Ishida et al” because “Ishida et al disclose that [conventional] titanium dioxide is poor in transparency to visible light, and also inadequate in shielding against UV-A rays. Contrary to Applicant’s assertion, the statement made in the Ishida patent, which declares the superior UV shielding ability of zinc oxide over titanium dioxide (as recited in Applicant’s argument), would have provided one ordinary skill in the art the motivation to replace titanium dioxide taught in the Maeda patent with the zinc oxide particles taught in the Ishida patent.

4. Applicant's arguments filed April 15, 2005 have been fully considered but they are not persuasive for the reasons set forth above.

5. Newly cited reference, US 4,128,630 to Hayashi et al, teaching inorganic pigment including zinc oxide whose surface is coated with metallic soap, is considered pertinent to some of the instant claims.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



H. T. Le
Primary Examiner
Art Unit 1773

June 10, 2005.